

Raytheon Aircraft

Beech
Hawker

Wichita, KS 67201-0085

General

January 26, 2000

In Reply Refer To: 940-00-01-285

Department of Transportation, Dockets
Docket No. FAA-1999-6411
400 Seventh Street SW, Room Plaza 401
Washington, DC 20590

Subject: Docket No. FAA-1999, Notice No. 99-18

Dear Sir or Madam:

Raytheon Aircraft Company (RAC) wishes to comment on Docket Number FAA-1999, Notice No. 99-18, "Transport Airplane Fuel Tank System Design Review, Flammability Reduction, and Maintenance and Inspection Requirements." The proposed changes in this NPRM are clearly written for commercial transport aircraft certified with 30 or more passengers or with a payload of 7,500 pounds or more. Data gathered by the FAA and NTSB to support the proposed changes were taken from large commercial aircraft. While this NPRM is applicable only to the larger Transport Category Aircraft, FAA has solicited comments (page 58652, third column last paragraph) regarding the applicability of this NPRM to smaller Transport Category Aircraft (less than 30 seats) and Commuter Category Airplanes. The majority of the comments in this letter are intended to reply to FAA's request for comments on those smaller aircraft. RAC also has some comments on the NPRM in general.

RAC applauds FAA's limitation on the applicability of this NPRM until it can be determined that these changes are appropriate for these smaller airplanes, and until proven that benefits from compliance for smaller airplanes would be commensurate with cost.

Specific Comments on the NPRM in General

FAA describes a design anomaly, fuel tank ignition event, on a Beech 400 airplane (page 58649, third column, first paragraph). This example should be removed as background justification, as this model aircraft is not a transport aircraft with 30 or more passengers or with a payload of 7,500 pounds or more. However, if FAA chooses not to remove the example, it should be clearly noted that the Model 400 is a Transport Category with less than 12 seats, less than 16,000 pounds maximum gross take off weight (See TCDS A16SW).

Under Alternative 1, the NPRM states (page 58661, third column): "Require all airplanes in commercial service with more than 10 seats to be covered by the proposal." However, the following explanatory paragraph states, "Alternative 1 would require all airplanes operating under Part 91, 121 125 and 129 to comply with the proposal." What does FAA mean by "Commercial Service"? Part 91 applies to private operations. The FAA further states that "airplane operation

is not the principal business for many of these operators." This statement is applicable to those airplanes only operating under FAR Part 91. However, for the FAR Part 121, 135, and 129 operators, this is an incorrect statement.

RAC recommends that advisory material for compliance with FAR 25.981 be made available concurrently with issuance of this rule.

Applicability of NPRM to Smaller Transport Category and Commuter Category Aircraft
General Aviation FAR Part 25 aircraft produced by Raytheon and aircraft certified in the Commuter Category, do not fit the criteria used to support the proposed change. The fuel system designs, configurations, and maintenance procedures differ greatly from the large transport category aircraft. These (large transport) aircraft are much larger in: fuel tank sizes, fuel volumes, fuel flow usage rates, fuel transfers, fuel balancing and fuel heating.

RAC knows of no RAC commuter category (Models 1900D, B300) airplane in-flight fuel tank explosions. The Model 1900D and B300 fuel systems are relatively simple compared to the larger aircraft. The fuel tanks quantity indication systems operate at low voltage and current levels that do not cause arcing. In addition, all pump wiring is outside the fuel tanks. No foam is installed in the fuel tanks. Circuit breakers protect wires against electrical short circuits, all major fuel system components are electrically bonded to airplane structure, and no large heat source is installed in close proximity to the fuel tanks. The highest temperature experienced in the fuel tanks is well below the lowest expected fuel auto-ignition temperature.

In summary, RAC does not support issuance of similar rules to small transport category (less than 30 passengers or with a payload of less than 7,500 pounds) and commuter category aircraft.

Sincerely yours,
RAYTHEON AIRCRAFT COMPANY

John C. Kennedy for

A. C. Jackson, Director
Product Design Assurance & FAA Liaison

ACJ:DMW